RISING TO THE CHALLENGE: SUPPORTING EDUCATORS WITHOUT ARTS EXPERIENCE IN THE DELIVERY OF AUTHENTIC ARTS LEARNING

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Abstract

Educators, policy makers and researchers have repeatedly affirmed the significance of a quality arts education in developing the capabilities necessary for 21st century citizenship. However, facilitating an Arts education can be extremely challenging, especially for the generalist classroom teacher who may not possess the necessary background learning across all five arts subjects. Revelations from my research with Australian home educating parents identified a similar dilemma with the delivery of authentic Arts learning in home contexts. A significant proportion of the home educator study participants admitted to no educational or artistic training. My doctoral research project has sought to understand how Australian home educators approach arts education, the challenges they face, and the way that existing knowledge and strengths are harnessed in delivering their children's education. Moreover, using a Design-Based Research approach, I have attempted to generate transformational research by working collaboratively with home educators to enact solutions to identified problems. This has resulted in the development and refinement of a website and online community aimed at supporting and enhancing home educators in the development of authentic arts learning, in addition to theoretical guidelines that can be applied to similar contexts. Thus, whilst home education is considered pedagogically distinct from institutional education, the findings of this project have highlighted that the challenges faced by home educating parents are very much like those faced by the generalist classroom teacher, and that similar means of support may be transferred across contexts.

Introduction

Extensive research has affirmed the significance and centrality of Arts learning to a holistic education (Ewing, 2010; Robinson, 1982; Stake, 1976). Yet educational reality does not appear to align with ongoing recommendations that arts learning is intrinsically valuable, with many educational spheres continuing to relegate the Arts to the margins as an extra-curricular learning domain (Ewing, 2010). Whilst the reasons behind this sidelining of the arts are complex and varied, they are exacerbated by the challenge presented to the generalist teacher when ill-prepared to teach into a field that covers five art forms: Dance, Drama, Media Arts, Music and Visual Art, each with its own set of disciplinespecific concepts and skills. For the generalist teacher who possesses no formal training in some or all of these five Art subjects covered by the Australian curriculum, lack of training can form a significant hindrance to their sense of confidence and competence in delivering a quality arts education (Alter, Hays, & O'Hara, 2009a; Donnelly & Wiltshire, 2014). I have encountered a similar dynamic in my early research with Australian home educators regarding their facilitation of their children's arts learning, with many parents expressing they feel ill-equipped to deliver a quality arts education across all five art forms (Burke, 2013). Curriculum expectations for home educators vary between states, however many parents choose to explore all subjects in the Australian curriculum in order to align with institutional learning - including learning in all five art forms in the Australian curriculum: The Arts. This poses a significant challenge for many. As an arts advocate and former home educator, these findings prompted a desire to rise to this challenge and develop a support resource for the delivery of authentic arts learning in Australian home education.

This paper reports on findings from parts of my doctoral research project wherein I employed Design-Based Research in order to understand, support and enhance arts learning for Australian home educators, and draws upon these findings and existing research into arts learning in the generalist classroom to ascertain elements of my research that may be helpful to the classroom context. It is approached in four sections. First, I present a review of relevant literature which forms important theoretical underpinnings to the research. I then present an overview of – and rationale for - Design-Based Research and how it has been applied in my research context. Findings from the first phase of my research are then explored, highlighting how the challenges faced by home educators share significant commonalities with generalist classroom teachers. The final section presents the theoretical and practical outcomes of my doctoral project, and suggestions are offered that show how the project's findings into supporting arts learning in the home education context may be beneficial to supporting arts learning in the classroom context.

Review of the literature

Two important understandings underpin this research. First, home education is a rapidly growing educational phenomenon in Australia, and an educational choice that is increasingly being considered by parents as a legitimate educational option (Roy, 2016; Strange, 2013). This is coupled with an understanding regarding the value of the Arts to a holistic education that adequately prepares students with the critical and creative capacities considered fundamental for twenty-first century citizenship (Australian Curriculum Assessment and Reporting Authority (ACARA), 2011; Ministerial Council on Education Employment Training and Youth Affairs, 2008). Given the growth of home education in Australia, developing understandings of how the Arts are being facilitated within this rapidly growing educational sector is warranted.

In the context of this project, home education is defined as the facilitation of children's academic learning by their parents or caregivers from a home base, independent of an institutional schooling context (Neuman & Guterman, 2016a). It is thus considered distinct from other forms of home-based learning, such as distance education and online learning. Whilst pedagogical approaches within home education are exceedingly diverse, research identifies that the nature of learning in home education aligns closely with sociocultural and constructivist learning approaches (Barratt-Peacock, 1997, 2003; Jackson, 2008, 2009; Neuman & Guterman, 2016b). These approaches emphasise learning as a process that occurs via a learner's engagement with a community of practice in which learning occurs as a feature of membership in that community (see Lave & Wenger, 1991). Home educated children are described as cognitive apprentices in the family's community of practice (Barratt-Peacock, 1997) wherein parents act as guides to the wider field of authentic adult practice through family conversation, role modelling, domestic occupation and engagement with the wider world. "School work" is naturally and easily related to the wider sphere of everyday interactions and learning is focused on developing the whole person. Home educated children thus gain situated understanding in authentic contexts (Neuman & Guterman, 2016b), as compared to the "abstract representations, with decontextualisation" that are often characteristic of schooling (Lave & Wenger, 1991, as cited in Barratt-Peacock, 2003, p. 104). Jackson (2008) argues that a sociocultural lens is necessary for genuine insight into home education practices, and in the context of this project, sociocultural theory was considered foundational in understanding arts practices within participating home education contexts.

Sociocultural approaches to learning are equally recommended as an ideal means of engaging with the arts (Ewing, 2010). A sociocultural view of arts learning recognises the fundamental importance of the Arts as vehicles of communication that express and connect the stories, values and ideas of individuals, communities, and cultures (Cornett, 2011). When approached as sociocultural practice, the arts provide opportunities to engage in collaborative learning opportunities and to enact and interpret artistic explorations of human experience that forges connections between individual

experience and the wider world (Holland & O'Connor, 2004). Further, given my focus on supporting "authentic arts learning" in home education, a sociocultural view of arts learning provides a useful "yardstick" for a definition of authentic arts practices. Dinham's (2014) work into authentic arts practices stands in contrast to traditionally held attitudes, which typically view the Arts as an extracurricular subject with lesser importance than other academic subject areas. In contrast, authentic arts learning develops children's creativity, self-expression, and aesthetic sensitivities through rich experiences developed on a foundation of arts knowledge and skills (Dinham, 2014). I consider that a sociocultural approach to arts learning embodies the hallmarks of authentic arts practices. A sociocultural approach to arts learning develops a learner's ability to express concepts, thoughts and feelings through multiple forms of communication, establishes multi-modal literacy, and engages them with the cultural world in an authentic learning environment.

Whilst an understanding of home education as a form of sociocultural practice in which families are recognised as communities of practice underpins this research project, it equally raises questions regarding the potential impact upon a child's arts learning when the parent lacks a background in the arts. Studies have highlighted the context-dependent nature of creativity, concluding that exposure to creative environments is necessary for the development of children's creativity and self-expression (Lubart, 1999; Nilson, 2011). Such concerns are also raised in classroom settings. An ongoing debate exists as to whether the arts can effectively be delivered by generalist classroom teachers who possess no specialist arts knowledge (Barton, Baguley, & MacDonald, 2013). Those who advocate for skilled specialist arts teachers assert that generalist teachers lack the required knowledge and skills to effectively teach the Arts. Conversely, advocates for the delivery of arts learning through generalist teachers maintain that an intimate knowledge of students and their wider engagement in other facets of classroom learning can permit a more authentic, integrated approach to the Arts (Seidel, Tishman, Winner, Hetland, & Palmer, 2009). Similar questions can be asked of arts learning within home education: whilst many parents may not have specific arts training, does their intimate understanding of their children within their community of practice enable the delivery of authentic and situated arts learning? It was a goal of this project to ascertain the impact of parental background arts learning in the facilitation of their children's arts education, but moreover, to gain insights into how the delivery of arts learning might be supported, even if background knowledge is lacking.

This brief exploration of relevant literature shows that sociocultural theory provides the underpinning theoretical framework for not only understanding home education, but arts learning within this context. The research literature also highlights that concerns regarding the facilitation of arts learning by generalist classroom teachers is mirrored in a home education context. It is at the intersection of these issues that this research fills a gap in understanding, providing insight into how home educators engage with the Arts, which provides scope for comparison with the experience of generalist classroom teachers.

A rationale for Design-Based Research

As a researcher, arts advocate and former home educator, I desired to use the research process to generate genuine benefit for the home educating community. Earlier research I had conducted for a Masters project (Burke, 2013), identified a dearth of support resources for arts learning in home education, and I consequently turned to Design-Based Research (DBR) for my doctoral study. DBR attempts to address the oft-cited chasm between research and practice by placing emphasis on both practical and theoretical research outputs (Reeves, McKenney, & Herrington, 2011). The Design-Based researcher works collaboratively with practitioners to identify experienced problems, and generate empirically-grounded solutions, in addition to theoretical insights – known as "design principles" - on why the solution is effective (Wang & Hannafin, 2005). The outcomes of the design process represent both practical and theoretical outputs that help to balance local effectiveness with theory development (Sandoval & Bell, 2004).

In my doctoral project, I initially worked collaboratively with 193 Australian home educators to identify the challenges they face with the facilitation of Arts learning, and of specific needs that – if fulfilled – would support and enhance authentic Arts learning in the home. These understandings, and reflection upon existing theory and learning models, were used to inform the development of a "design solution" to this problem: a prototype online arts learning environment for home educators which was iteratively trialled and refined over the course of one year. The project resulted in an Arts website for home educators: *homeiswheretheartis.com.au*, in addition to a set of theoretical descriptions, or "design principles", which underpinned the final design.

The qualitative project was structured according to the four phases of DBR developed by Reeves (2006), with an emphasis on grounding each new phase in the developing analysis. Table 1 provides an overview of each phase in the project. Analysis was approached in the spirit of *bricolage* (see Kincheloe, 2001), with the flexible adaptation of analytic tools according to the specific needs of each phase of the project. In particular, inductive thematic analysis was utilised, wherein I identified themes for analysis that emerged from the research questions and emergent issues across the multiple forms of qualitative data collected throughout the project. Data were summarised under each theme; and patterns, themes, and relationships within these themes were identified and coded inductively (see Hatch, 2002). This process permitted the development of generalisations and theory from analysis which could inform successive phases of the project and the final analysis.

Table 1 Project overview

Phase	Focus	Strategy
Phase one Needs analysis	Identification of: • how arts learning occurs • home educator's existing strengths • challenges in delivering arts learning • specific needs	 Immersion in the research context as a member of the home education community, large scale anonymous internet survey (193 respondents)
Phase two Formative evaluation	 Using existing design principles, heuristics and theory from related contexts, develop draft design principles Develop a prototype design of the support resource, guided by draft design principles 	 Extensive literature review Consultation with experts in related fields (3)
Phase three Effectiveness evaluation	Iteratively evaluate and refine the effectiveness of the online learning environment to develop understandings of • the effectiveness of the website; • future website improvements; and • how learning most effectively occurs in this context.	 Interviews with home educating participants (15) observations of arts learning in action (10) Anonymous surveys (3) Participant artefacts (emails, uploads to the website, forum participation, sitestatistics and web conference discussions)
Phase four Solution Implemen-	Generate knowledge and product outputs: design principles for learning design for home educators/online arts support an arts website and online community for home educators	 Ongoing data analysis using inductive thematic analysis engagement with literature in related contexts

Although the resultant design principles from any DBR project are targeted at their specific context, an additional feature of DBR is that the design principles are potentially reusable, transcending the specific context in which they were developed (Barab & Squire, 2004). As such, whilst the design principles developed throughout this project target home education, engagement with research into the experience of generalist classroom teachers reveals similarities with the challenges experienced in the

facilitation of arts learning, and ways in which a number of project findings may be useful for supporting arts learning and learning design in broader educational contexts.

Comparison of challenges experienced by home educators and generalist classroom teachers

In this section, I correlate my findings regarding the challenges expressed by home educators when facilitating their children's arts learning with wider research regarding the experience of generalist classroom teachers. The perspectives of 193 home educators throughout Australia were elicited via an anonymous internet survey during the first phase of my research. Thematic analysis of the survey data highlighted common challenges that were experienced by participants. These were issues pertaining to:

- Insufficient background knowledge or confidence;
- Resourcing arts learning;
- Time constraints;
- The scope of the Arts; and
- Catering to individual student needs.

Findings according to each of these expressed challenges are now explored, with corresponding insights into the challenges identified by generalist classroom teachers.

Insufficient background knowledge or confidence

Arts learning in the home was found to be extensively influenced by parental background. Some participants possessed an arts-rich background, with specific competencies that informed their teaching approach, whilst others acknowledged very little background in the Arts, which similarly impacted their perception of the quality of their arts facilitation. Comments such as the following highlighted how background learning in the arts and sense of confidence could impact upon arts learning, causing it to be avoided or minimised:

"Because I lack skill in the Arts myself and knowledge about different types of art, I find it hard to teach this subject to my children".

"I lack confidence in drawing, painting etc, and find it too easy to put those activities off."

The relationship between background, confidence, and a sense of competence in facilitating arts learning mirrors the experience of generalist classroom teachers. A teacher's lack of confidence in their own effectiveness in any given area has been found to substantially hinder effective teaching in that domain (Alter, Hayes & O'Hara, 2009), and the quality of arts education in particular has been found to be dependent on their existing arts experience (Bamford, 2006; Dinham, 2007). Researchers consistently affirm the need for more arts training in pre-service teacher training (Bamford, 2006; Dinham, 2007, 2014; Russell-Bowie, 2011), reinforcing the significance of sufficient arts knowledge and competency in the facilitation of a quality arts education. However, home educating parents are not required to undergo formal educational training, leaving many feeling ill-equipped. Similarly problematic in classroom contexts, in-service teachers may not have adequate access to pre-service training or ongoing professional development. Such findings indicate that for both home educators and generalist classroom teachers without a background in the arts, the provision of adequate training and support in the Arts is a priority that must be addressed.

Resourcing the Arts

Many home educating participants acknowledged that they sought, but did not necessarily have success in accessing, quality resources for arts learning. References to resources included prepurchased curricula and learning guides, materials and tools with which to engage in the Arts, and opportunities for arts engagement in the community such as events, performances, and private lessons.

The majority of families acknowledged that curriculum or learning resources formed an important element of their approach to arts learning, and these provided direction and inspiration, especially when their own sense of confidence or competence in some aspect of the Arts was lacking:

"For areas of the arts I am not skilled in, I use resources that I find both instructional and inspiring. In areas I feel confident in I go with what I know my son will enjoy, using my own knowledge and experience to guide the learning process."

However, finding appropriate resources for both individual needs and the home education context was a common struggle. When asked about their challenges, responses included sentiments such as:

"...sourcing resources designed for delivery in the home, by the home-school methods rather than designed for school room delivery by specialist teachers."

The most significant inhibiting factor in accessing resources for many was financial constraint. Participants frequently referred to the cost of appropriate materials, the cost of purchasing curriculums, associated tools (such as musical instruments or software) and of outsourcing fees to specialist instruction.

The poor state of access to resources and its impact upon the quality of arts learning is similarly evident in Australian schools (Davis, 2008; Ewing, 2010; Gibson & Anderson, 2008). In their research with 19 generalist classroom teachers regarding their experiences in facilitating arts learning, Alter et al. (2009a) identified that teachers felt overwhelmed by a number of facets of facilitating arts education, including finding resources, with a repeated concern among participants regarding the lack of arts resources and opportunities. In her recommendations for improving the experience of generalist classroom teachers in the facilitation of the Arts, Russell-Bowie (2011) advocates for the provision of adequate resources and facilities, such as instruments, art equipment and supplies, and open space to permit creative movement. However, the Arts in Australian education continue to receive little funding, and even though excellent examples of arts programs exist across Australia, more numerous examples may be found where inequitable access and inadequate resourcing exist (Ewing, 2010). Such findings highlight that limitations in accessing adequate resourcing exist for both home educators and classroom teachers, and that the lack of resources impacts upon the quality of arts learning.

Time constraints

Time constraints were frequently mentioned by participants as an inhibiting factor for arts learning. The Arts were frequently identified as time-intensive, and challenging to fit into busy schedules. Furthermore, the Arts were often a last priority in a long line of competing needs experienced by participants who were both parent and teacher, and a number of participants acknowledged that other subjects often took precedence. Even parents who highly valued the Arts admitted that the Arts were the "first to go" when time was tight, or other subjects presented difficulties:

"I struggle to place emphasis on art time because there are many competing subjects and other things to do. I have seen [how] participating in Art with my kids is enjoyable and relaxing for me and good for mental health. So there are benefits all round... I know it's good to do, but when push comes to shove, it goes out the door."

"It can be hard 'justifying' the time spent on the Arts as it is so often viewed as something 'recreational' or that you do 'in addition' to school: like an extra-curricular activity, rather than an important part of the homeschool 'curriculum'. I have to remind myself constantly to make it an equal priority rather than just fitting it in around the more academic subjects."

Research into classroom contexts reveals a similar dynamic, where the Arts have long been considered of lesser importance than other subject areas (Bodilly & Augustine, 2008; Gibson & Anderson, 2008), and this is further revealed in the time that is allocated to creative arts education programs, which receive the least attention of all curriculum subjects (Alter et al., 2009a). In addition to the lower priority often afforded to the Arts were issues of teachers who felt overwhelmed in the face of so many competing demands (Alter, Hays, & O'Hara, 2009b). Allocating priority to arts learning in light of competing pressures was thus a common issue for home educators and classroom educators alike.

The scope of the Arts

The breadth of necessary skills and knowledge to adequately teach all five art forms in the Australian curriculum left many home educating participants feeling overwhelmed by the scope of learning to be covered in an already-busy curriculum. For some, this challenge led to a compromise: focusing on the art forms with which they felt comfortable and omitting those that were too challenging from formal learning. Some families tried to cover all five art forms and found it stressful. Others outsourced where possible those art forms they felt unable to cover.

"The 'Arts' is a broad subject, so I find it hard to cover it all. I end up not covering it all."

"The large scale of it; I feel confident in some areas and severely lacking in others. My husband fortunately has skills in some of my lacking areas but I still feel we need to put a lot of effort into making sure our children get to experience and learn about all aspects of the Arts."

"I do not have a background in the Arts myself and so I need to outsource most of the time to adequately cover the subject matter."

Parents admitted to focusing on the more "accessible" or easily taught art forms and omitted, or outsourced where possible, the more challenging art forms. However, the cost of outsourcing meant that many families had to choose between arts subjects based upon the cost of private tuition.

Classroom educators have similarly expressed the view that too much is expected of them with regard to teaching all five art subjects in the Creative Arts (Alter et al., 2009b). In the 2014 Review of the Australian Curriculum, concerns were expressed regarding many aspects of the Arts curriculum, and "whether generalist teachers would be able to handle all or any of these art forms, since they were written as specialist learning areas by specialists" (Donnelly & Wiltshire, 2014, p. 212). In a response to this review, the defence of the current approach to the Arts curriculum did little to alleviate the significant scope of the generalist teacher's responsibilities: "There are five stand-alone subjects, each with its own comprehensive, sequential and developmental curriculum for years F–10 in Dance, Drama, Music, Media Arts and the Visual Arts" (National Advocates for Arts Education (NAAE), 2014, para 5). Whilst many arts educators strongly advocate for specialist arts teachers to be employed to provide guidance and support to generalist classroom teachers (Donnelly & Wiltshire, 2014; Russell-Bowie, 2011), the current reality sees teachers (and home educators) without consistent support in delivering all five art forms, and consequently, often overwhelmed by the task.

Catering to individual student needs

Catering to individual student needs proved particularly challenging for the facilitation of arts learning among participant home educators. Issues such as gender, age, personal interests, and special needs were all mentioned as aspects that made the delivery of arts learning more challenging across individual needs. Most notably, the multi-age nature of most home educating contexts meant that parents were struggling to find arts learning that was relevant and appropriate to a variety of age-

levels, or overwhelmed with the task of developing unique learning for each age level. Meeting the interests of students in the high school years appeared to be more challenging than the spontaneous interaction of younger children, and catering to the interests of boys in the Arts was mentioned by a number of participants, particularly with regard to Dance.

Similar challenges have been found for classroom teachers. Catering for children with disabilities, diverse cultural backgrounds, and differing abilities and aptitudes increases the demands upon classroom teachers (Dinham, 2014). Gender also remains influential in arts engagement, and has been found to significantly influence the types of activities teachers feel they can facilitate with their students (Alter et al., 2009a). The Australian curriculum Arts Shape paper advocates for arts learning that incorporates engagement with specific knowledge and skills about art forms to facilitate the creation of art works in a manner that promotes individual creativity, understanding of cultures and critical and creative thinking (ACARA, 2011). As such, whilst the Arts open wonderful learning opportunities that encourage and celebrate individuality and diversity, the specific arts knowledge and skills required to do so in an authentic manner make catering to individuality and diversity a challenge, especially when an arts background is lacking.

Findings and potential implications for classroom contexts

The above exploration of the challenges faced by home educators when facilitating their children's Arts education highlights that there are a number of similarities between their experiences and those of generalist classroom teachers. This comparison forms an important foundation for the following sections of this paper, where I explore the findings from the latter phases of my Design-Based Research project, and show how findings regarding the design of an arts support resource for home educators - homeiswheretheartis.com.au - may be adapted for the support of classroom teachers.

The appeal of DBR for educational researchers, and the predominant reason it was adopted for this research project, was its focus on bridging the theory-practice divide. Following the identification of challenges home educators experience when facilitating their children's arts learning, I determined that an online learning environment which could be accessed synchronously and asynchronously by participants regardless of location was an ideal and equitable platform for a support resource. I thus engaged with wider research and existing design guidelines for learning in the three contexts relevant to this study: home education, arts learning, and online learning environments. This engagement with theory led to the development of a set of theoretical guidelines, known as "draft design principles" that would guide the prototype design process. Based upon the draft design principles, the prototype of homeiswheretheartis.com.au was developed and then refined in response to feedback from experts in home education, arts learning, and online pedagogy. Homeiswheretheartis.com.au was then iteratively trialled in three phases over the course of one year with approximately 80 participating families. The outcomes of the design process represent both practical and theoretical outputs, and in this final section, I turn to an exploration of the project findings, discussing these according to theoretical and practical research contributions. I argue that these have relevance for classroom educators, who experience a number of similar challenges, and who therefore may also benefit from the adaptation and application of project's findings.

Design principles - theoretical research outputs

The major theoretical output from this research was a set of design principles for the design of online arts learning environments. The final six design principles, which were refined through the three iterations of *homeiswheretheartis.com.au* are now explored, and recommendations are made as to how these may be relevant for supporting generalist teachers.

Design principle 1: Learner at the centre

"Learner needs and interests should drive the direction of learning tasks"

The needs of individual learners are a central concern for home educating parents (English, 2015). Throughout all phases of the research process, I noted that parents elicited these understandings very naturally through the course of living and learning together with their children. Developing learning based upon the needs and interests of individual children was not only a central concern of home educating families, it is equally a concern of classroom educators and is reflective of a long line of educational theorists, researchers and practitioners who advocate for child-centred education (Doddington & Hilton, 2007). Initiating learning design with the needs of the learner therefore needs to be addressed as a first consideration. Rather than trying to fit pre-planned arts tasks to a context and needs of a child, the child's needs and interests should represent the launch point for the design of arts learning.

Design Principle 2: Authentic tasks

"Facilitate situated, open-ended, learning tasks that represent real life situations or challenges in the learner's context, in addition providing opportunities to integrate the Arts with other learning domains."

Each phase of the research confirmed that context was as an extremely important driver of arts learning for participants. As such, situated learning, which "[connects] learning to the real, rather than the academic, world" (Barratt-Peacock, 1997, p. 106) was widely evident among participant families and an important feature of participants' pedagogical approaches with respect to arts learning. It is equally advocated as an important pedagogical approach that is advocated for the classroom in order to generate meaningful, rather than decontextualized and superficial, learning experiences (Brown, Collins, & Duguid, 1989). The provision of structures that supported families and educators in facilitating situated, authentic learning tasks was thus an important goal. The development of learning materials should engage children in authentic tasks that have meaning beyond "school work" and that contribute to the wider world of art, meaning-making and sociocultural practice (Brown et al., 1989). This is relevant in both home education and classroom contexts.

The integration of arts learning with other subjects was valued as an extension of authentic learning tasks, whereby the family's context, which included learning in broader domains, could inform and provide the context for the authentic learning tasks (see Brown et al., 1989). Integrated arts learning embeds the arts more meaningfully in the wider scope of sociocultural practice, bringing meaning to arts learning and enriching the wider learning sphere (Ballengee-Morris & Stuhr, 2001). It is vital however, that genuine arts integration develops enriched understanding in both the arts subject and the related subject area/s, where all "subjects" are understood more richly as a result of integrated learning (Dinham, 2014). An important outworking of this design principle is therefore the provision of scaffolding which helps educators to identify opportunities and strategies to develop authentic tasks in their context.

Design Principle 3: Authentic arts learning

"Promote effective strategies and support materials to assist parents in developing arts learning that engages with Arts literacies relevant to the task."

Specific instruction in the tools of the arts is key to authentic arts learning, and an oft-overlooked aspect of arts instruction, especially when the Arts are integrated with other learning domains (Russell-Bowie, 2015). Foundational arts concepts and processes must be explicitly taught if arts learning is to be rich and authentic (Cornett, 2011). This requires educators, whether generalist teachers or home educators, to identify the concepts and skills that are important and relevant for each "arts encounter", and to plan for the attainment of these concepts and skills. However, this feature of arts learning was identified as the most challenging for parents and generalist classroom teachers who possessed little background in the various art forms (Alter et al., 2009a). Therefore, the development of effective support materials to scaffold the identification of foundational arts concepts and skills,

and the provision of quality examples in order to develop arts literacies and skills must be provided in an effective support resource.

Design Principle 4: Flexible Scaffolding

"Provide flexible scaffolding for arts learning tasks"

Children need to be scaffolded to work within their Zone of Proximal Development (see Lave & Wenger, 2005), and this can be most appropriately facilitated in the home education context by an involved parent who is intimately acquainted with the child's individual needs and capacities (Harding, 2011), or a classroom educator with strong understanding of student needs. The design of an arts support must therefore provide flexible support structures that can be tailored by parents or educators to appropriately scaffold their learners' specific needs. Based on the significance of developing learning that is authentic to individual contexts, support structures in homeiswheretheartis.com.au needed to be adaptable to the many facets represented in individual contexts. The flexible scaffolding that was developed and refined through the three iterations of homeiswheretheartis.com.au included the development of a number of features, explored in the final section of this paper.

Design principle 5: Community support

"Provide support for parental knowledge and understanding through meaningful collaboration in an online community of practice that facilitates interaction with the content, mentor and peers"

My research with home educators had identified the benefits of connecting educators in communities of practice to share existing strengths across the arts and support each other in developing their skills and confidence in arts teaching and learning. Engagement with such findings and relevant literature highlighted that the online learning environment should provide a means for parents to collaboratively construct knowledge and understanding to support and inform their arts education practice. Parents and educators possess a broad variety of arts knowledge and understanding, and therefore, mentoring processes should be facilitated, providing less proficient learners access to the guidance and modelling of those with greater competency in the arts.

Design Principle 6: Accessible technological platforms

"Make use of existing social platforms with which members are already engaged"

In each iteration of the testing and refinement of *homeiswheretheartis.com.au*, findings affirmed how significant the usability of the technological platform was to the success of the learning environment. Making use of existing social platforms and communities with which participants were already engaged was found to have an immediate positive effect on participant willingness and frequency of engagement. Wenger, McDermott and Snyder comment,

Because communities of practice are organic, designing them is more a matter of shepherding their evolution than creating them from scratch. Design elements should be catalysts for a community's natural evolution. As they develop, communities usually build on pre-existing personal networks. (2002, p. 51)

Such insights helped to reinforce the value of making use of existing networks and communities that were already operating successfully, rather than attempting to create an entirely new community.

Designed products – practical research output

The learning environment: *homeiswheretheartis.com.au*, is the major practical research output of this study, and represents the practical outworking of the above design principles. The website was designed to operate on two levels. At the first level were flexible arts learning resources that parents could access and adapt to their individual context. At the second level, a variety of interactive features

stimulated and supported an online Community of Practice in the use of the website's "level one" resources.

The arts learning resources provided scaffolding for parents to facilitate integrated, situated, openended arts learning tasks in individual contexts. These were arranged according to each of the five art forms. On each art form page, further sub-pages provided a series of potential arts lessons or activity ideas, each with:

- supporting web-links and instructional videos specific to that activity or project idea;
- suggestions for integration with learning in other subject areas;
- example lessons or project guides;
- strategies for interpreting and applying the Australian curriculum; and
- strategies and tutorials for developing specific artistic skills and knowledge unique to that art activity or project.

A central website resource was a framework for meaningful integration of arts learning with other subject areas (Figure 1). This *Guide to the Arts across the Curriculum* was an interactive framework that stepped parents through flexible, achievable stages of developing an arts-rich project that started with the interests and needs of the child and incorporated foundational arts literacies to ensure authentic arts learning took place. Each step of the framework was scaffolded by links to supporting resources and strategies within the website, such as a flexible planning template, reflection guides, and links to relevant examples of high quality arts performances and artefacts in each of the art forms.

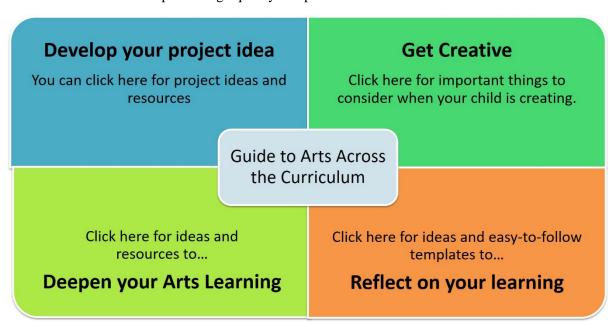


Figure 1 Guide to the Arts across the Curriculum

The arts learning resources were then presented in an interactive online environment which enabled members to interact with the resources and each other in an online Community of Practice. In this community, the use of website resources could be supported, questions asked, additional resources contributed by members, and expertise shared. The website provided:

- a *Project Gallery* a space for families to share examples of their arts engagement, which allowed families to directly upload images, audio recordings, video, and written documents;
- Forums and a comments function within the Project Gallery;

- A *Project of the Month* initiative wherein a flexible arts project was set and families invited to share their responses in the Project Gallery; and
- Access to semi-regular online interactive webinars, which focused on developing specific arts competencies according to the current project of the month.

Through the iterative process of testing and refining this learning environment, the study has affirmed the value of this designed product through its beneficial impact on the arts learning of participating home educators. The majority of participants found that their involvement in *homeiswheretheartis.com.au* and associated research not only enhanced their appreciation of the arts, but also deepened their engagement with more authentic forms of arts learning and helped them to feel that it was more achievable in their context. The effect of the research on home educated students was outside the scope of this study, and is considered a valuable potential focus for future research. The website and online community that were developed throughout the research process now continue to operate and support home educators in facilitating an arts education with their children. Interestingly, since making the website open to the public, a number of educators and pre-service teachers have also become members, again affirming that the principles underpinning its design may be useful to designing arts support resources for generalist classroom teachers.

Conclusion

It is the goal of the design-based researcher to bridge the theory/practice divide, and this project's findings have demonstrated the contributions that have been made to both theory and practice which have implications for home educators and, potentially, generalist classroom educators. In both contexts, educators have been shown to share similar challenges when facilitating arts learning, most of them based upon the lack of background training individuals possess in the arts. Whilst additional pre-service teacher training and professional development are absolutely affirmed as an important strategy to enhance the experience and confidence of generalist classroom teachers in facilitating authentic arts learning, this paper has presented a series of design principles for the design of support structures for home educators and potentially, generalist classroom educators, that may prove additionally helpful in designing a support resource to enhance the quality of arts learning when background experience and confidence are lacking.

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